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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,706	12/16/2003	Karl Schreiber	2560-0415	3451

7590 05/25/2006

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EXAMINER

HEINRICH, SAMUEL M

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,706

Applicant(s)

SCHREIBER ET AL.

Examiner

Samuel M. Heinrich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-12 and 21-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-12 and 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4-12, and 21-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,223,976 to Clement et al in view of Applicant's Admitted Prior Art (AAPA) and in view of Metals Handbook. Clement discloses the known process of laser joining, with or without filler material, of titanium aluminides. AAPA comprises descriptions in the specification, such as Background of the Invention, and comprises the Information Disclosure Statements which comprise documents pertaining to a variety of known joining processes for materials such as titanium aluminide. Metals Handbook describes (page 1064, column 1, last paragraph) "advantage laser brazing

offers ... is its ability to produce a brazed connection locally without heating the entire part or component” and describes “advantage is the high degree of control of the thermal energy of laser beams, including intensity, spot size, duration, and ability to be located or positioned precisely.” The use of a laser joining process for joining titanium aluminide aligned to form a braze joint and with a filler deposited in the braze joint would have been obvious at the time applicant’s invention was made to a person having ordinary skill in the art because the joint layup is known in the art and because the laser joining has well known properties such as having a small heat affected zone. Applicant has recited numerous dependent limitations which read like a book description of joining processes. There are numerous well known books and handbooks which describe all of the well known joining process limitations set forth in the instant dependent claims. The use of well known joining process limitations such as workpiece shape as a sheet, braze gaps, butt joints, protective gas, temperature and pressure, braze construction, and backing bars would have been obvious at the time applicant’s invention was made to a person having ordinary skill in the art because the teachings are readily available to all students of joining.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP61095769 in view of EP0904881A1 and in view of Applicant’s Admitted Prior Art (AAPA). JP61095769 describes laser brazing of a turbine blade. EP0904881A1 describes diffusion brazing methods for titanium aluminide parts. AAPA describes well known titanium aluminide turbine blades. Metals Handbook describes (page 1064, column 1, last paragraph) “advantage laser brazing offers ... is its ability to produce a

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brazed connection locally without heating the entire part or component” and describes “advantage is the high degree of control of the thermal energy of laser beams, including intensity, spot size, duration, and ability to be located or positioned precisely.” The use of a laser joining process for joining titanium aluminide aligned to form a braze joint and with a filler deposited in the braze joint would have been obvious at the time applicant’s invention was made to a person having ordinary skill in the art because the joint layup is known in the art and because the laser joining has well known properties such as having a small heat affected zone. The use of the laser brazing of well known parts made of well known titanium aluminide would have been obvious at the time applicant’s invention was made to a person having ordinary skill in the art because the laser is well known to provide a low heat affected zone and therefor maintains workpiece material properties. Applicant has recited numerous dependent limitations which read like a book description of joining processes. There are numerous well known books and handbooks, such as the Metals Handbook, which describe all of the well known joining process limitations set forth in the instant dependent claims. The use of well known joining process limitations such as workpiece shape as a sheet, braze gaps, butt joints, protective gas, temperature and pressure, braze construction, and backing bars would have been obvious at the time applicant’s invention was made to a person having ordinary skill in the art because the teachings are readily available to all students of joining.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, P. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Samuel M Heinrich
Primary Examiner
Art Unit 1725

SMH